

(For JSPS Fellow)

Form B-5

Date (日付)

06/07/2011

(Date/Month/Year: 日/月/年)

Activity Report -Science Dialogue Program-

(サイエンス・ダイアログ事業 実施報告書)

- Fellow's name (講師氏名): Shu-Ping Huang (ID No. P10351)

- Participating school (学校名): Ikeda High School

- Date (実施日時): 04/07/2011 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): (in English) Magical carbon based nanomaterials

(in Japanese) 魔法のような炭素からなるナノ材料

- Lecture summary (講演概要): Please summary your lecture 200-500 words.

Nanochemistry allows unprecedented changes of the fundamental properties of matters, giving rise to novel materials and, ultimately, new applications. Recent advances in computer technology and algorithm development have allowed theoretical calculations of the structures and properties of a wide variety of nanomaterials.

In my lecture, I firstly introduced my home town-China (culture and natural attractions), my education and work experiences. Secondly, I talked about nano (what is nano), and the effects of things happening at the nanoscale around us, such as the red sky at sunset (sunrise), the blue sky in the day time, and lotus effect. And I showed them that much of the fascination with nanotechnology stems from the size and surface effects that matter exhibits at the nanoscale. Thirdly, I introduced all kinds of carbon nanomaterials and their applications, let them know that structures determine properties, and taught the students how to wrap graphene into different types of (zigzag, armchair, chiral) carbon nanotubes. Finally, I talked about computer simulations at nanoscale, and showed to students that computer simulations are of importance in that they provide a better understanding of the properties of nanomaterials as well as allow predictions of the behavior of yet-unknown materials.

The translator interpreted for me for every slide. The question answer had been performed during the talk.

- Language used (使用言語): English (translated into Japanese by assistant)

- Lecture format (講演形式):

◆Lecture time (講演時間) 100 min (分), Q&A time (質疑応答時間) 5 min (分)

◆Lecture style(ex.: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))

Powerpoint Presentation

◆Interpretation(ex.: assistance by accompanied person, provided Japanese explanation by yourself) (通訳 (例: 同行者によるサポート、講師本人による日本語説明))

Assistance by Mr. Tomohisa Kouno

◆Name and title of accompanied person (同行者 職・氏名)

Mr. Tomohisa Kouno

◆Other note worthy information (その他特筆すべき事項):

I would like to thank Mr. Tomohisa Kouno for his kind translation.

- Impressions and opinions from accompanied person (同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。): 中学生、高校生は、外国人研究員の方から国のことや研究のことを直接聞くことはなかなか無いと思うので、非常にいい機会ではないかと思いました。しかし、授業の内容や通訳の役割がどの程度まで必要か事前に知らされていなかったため、準備不足となってしまったため、生徒たちにとっては、理解するのが難しかったらうなと感じました。そのため、事前に発表者と学校側、もしくは JSPS のスタッフの方達との情報交換が必要だと思います。